(e.g., at Overhall Grove, Cambs. on 7 August, Waring, 2003. *British Wildlife* **15**: 61). The White-spotted Pinion was in peak numbers, but the Square-spotted Clay had not yet reached its peak. Neither species was seen in Oxey Wood on this occasion although we knew the Square-spotted Clay to be resident. This result is a reminder of the hit and miss nature of light-trapping populations of moth at low density, especially with actinic traps. However, the catch of other moths was a large one: 81 macro-moths of 27 species, due to extremely warm days and nights at this time. Among the moths was a Lesser-spotted Pinion *Cosmia affinis,* an elm-dependent close relative of the White-spotted Pinion which is proving to be more widespread. This is the first ever record of the species from Oxey Wood, nor did we encounter it in the other Milton Estate woods inspected in the early 1990s. However, elm and its dependent species were not targeted at that time and populations of the Lesser-spotted Pinion could easily have missed detection. Other noteworthy species recorded at Oxey Wood on the night of 5 August 2003 were singletons of the Black Arches again, Maiden's Blush *Cyclophora punctaria*, Small Waved Umber *Horisme vitalba* and two rather worn Large Twin-spot Carpet *Xanthorhoe quadrifasiata.*

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European Corn Borer *Ostrinia nubilalis* (Hb.) (Lep.: Pyralidae) on hops in Kent

Stem-boring caterpillars were found infesting a one-hectare experimental planting of dwarf hops *Humulus lupulus* at East Malling (O.S. grid reference TQ 7057) in July 2003. A survey of 2800 plants on 15 August 2003 showed that 80% were infested and that tunnels occurred at all heights up to the trellis support wire at 2.5m. By August, many of the plants were suffering die-back of the cone-bearing lateral shoots. The continued presence of caterpillars in the tunnels during September, and their habit of tunnelling upwards rather than downwards suggested that the species responsible was not Rosy Rustic moth *Hydraecia micacea* (Esper), a minor pest of hops in UK first taken in the 1920s (Theobald, F.V., 1928. Notes on hop insects in 1927. *Entomologist*, **16**: 121-122). This was confirmed when six male and one female *O. nubilalis* emerged from stem samples collected on 6 November 2003 and stored for six weeks in a domestic refrigerator to satisfy any diapause requirements before being returned to room temperature. The adult moths emerged in March-April 2004.

Ostrinia nubilalis has been recorded from hops wherever they occur in continental Europe. Its incidence on hop has increased recently coincident with the introduction of imidacloprid, a target specific aphicide which replaced broad-spectrum organophosphorus products (eg Jastrzebski, A., 1999. The occurrence of European corn borer on hops. *Progress in Plant Protection* **39:** 436-438). Insecticides were last used on the dwarf hop planting at East Malling in 2001. No infested plants were found prior to 2003, nor at two sites in the west midlands (SO5840 and SO7359) and one in

east Sussex (TQ7057) in 2003. The latter three sites were monitored regularly because they represented commercial grower trials to manage dwarf hops without insecticides.

Goater (*British Pyralid Moths*, Harley) notes that *O. nubilalis* was a rare immigrant to the UK before the 1930s, but has since established on waste ground in counties bordering the Thames estuary and in towns along the south coast, almost entirely associated with mugwort (*Artemisia vulgaris*). Three morphologically indistinguishable strains of *O. nubilalis* occur in continental Europe (Anglade, P. et al., 1984. Intraspecific sex-pheromone variability in the European corn borer, *Ostrinia nubilalis* Hbn. (Lepidoptera, Pyralidae). *Agronomie* **4**: 183-187), with different host ranges, and separable by their responses to different blends of the sex pheromone stereoisomers. In northern France, the E-phenotype infests hops and mugwort and the Z- phenotype maize (Bourguet et al, 1999. La Pyrale maïs dans les houblonnières du Nord. Une race à part? *Phytoma* **517:** 48-49). Therefore, Emmett's warning (*A field guide to smaller British Lepidoptera*, p 217), that *O. nubilalis* could become a pest of maize in UK, may reflect less of a crisis than the proximity between crop and moth might otherwise imply. However, if the phenotype feeding on mugwort in UK is the same as that which infests mugwort and hops in northern France (Bourguet et al, loc cit), a possibility that we are investigating currently, it begs the question; why has *O. nubilalis* apparently not been taken from wild/feral hops in UK in the last 70 years, nor on commercial plantings in the seven years since imidacloprid's introduction?

Ostrinia nubilalis could prove an Achilles heel for dwarf hop growing as currently practised. Tall hops are grown up temporary supports and all potentially infested stems are cut down and destroyed before shoots emerge from the perennating underground rootstocks the following spring. By contrast, dwarf hops are grown up semi-permanent supports, so the stems in which the moths pupate are not removed each year.— COLIN A.M. CAMPBELL and EMMA TREGIDGA, East Malling Research, New Road, East Malling, Kent ME19 6BJ (E-mail colin.campbell@emr.ac.uk)

Northern Arches *Apamea zeta* Tr. ssp. *assimilis* (Doubleday) (Lep.: Noctuidae) discovered in Roxburghshire (vice-county 80)

One individual of the Northern Arches was trapped using a 125-watt mercury vapour Robinson trap at Wester Branxholme Loch, Roxburghshire (O.S. grid reference NT 421110) on 26 July 2004. The trap was operated overnight and emptied shortly after dawn.

This represents a new vice-county record and only the fourth record of this species for southern Scotland (see Mearns & Mearns, *Antea*: 103) of what is more often thought of as a speciality of the Scottish Highlands.

The trap was situated in an area of calcareous fen dominated by Slender Sedge *Carex lasiocarpa*, fringed by willows *Salix* spp. The fen is atypical of the general vegetation in the area. The majority of the Wester Branxholme Loch Site of Special Scientific Interest is an area of wet heath and there are also extensive areas of dry